



Comparison of ALCOR Foundation Training and my Passion





Parts

- ALCOR Foundation Training
 - Walking 
 - Running 
 - Flying 
- My Passion
 - 3 Parts

Walking



Schluchberg NW



Walking @ ALCOR

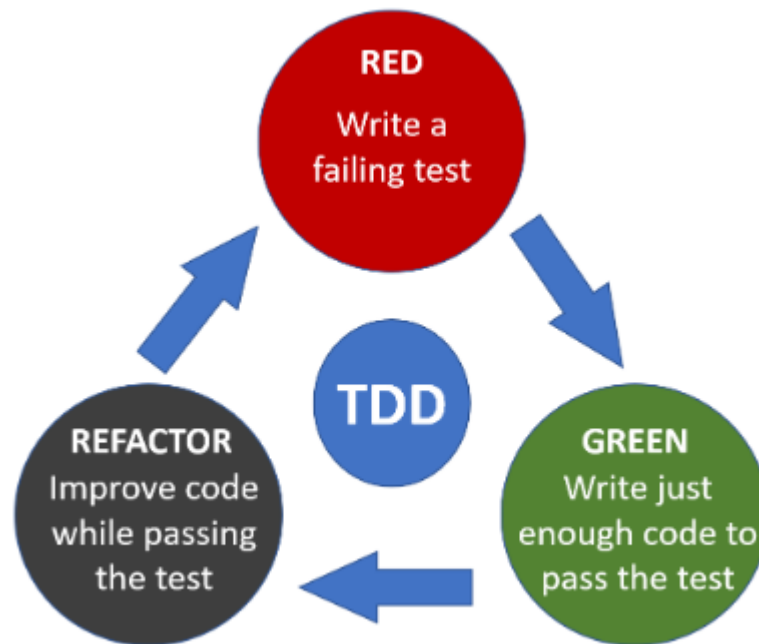
MOB Programming





Walking @ ALCOR

Test Driver Development (TDD)





Walking @ ALCOR

Transformation Priority Premise

#	TRANSFORMATION	STARTING CODE	FINAL CODE
1	<code>{}</code> => <code>nil</code>		<code>return nil</code>
2	<code>nil</code> => constant	<code>return nil</code>	<code>return "1"</code>
3	<code>constant</code> => constant+	<code>return "1"</code>	<code>return "1" + "2"</code>
4	<code>constant</code> => scalar	<code>return "1" + "2"</code>	<code>return argument</code>
5	<code>statement</code> => statements	<code>return argument</code>	<code>return arguments</code>
6	<code>unconditional</code> => conditional	<code>return arguments</code>	<code>if(condition) return arguments</code>
7	<code>scalar</code> => array	<code>dog</code>	<code>[dog, cat]</code>
8	<code>array</code> => container	<code>[dog, cat]</code>	<code>{dog = "DOG", cat = "CAT"}</code>
9	<code>statement</code> => recursion	<code>a + b</code>	<code>a + recursion</code>
10	<code>conditional</code> => loop	<code>if(condition)</code>	<code>while(condition)</code>
11	<code>recursion</code> => tail recursion	<code>a + recursion</code>	<code>recursion</code>
12	<code>expression</code> => function	<code>today - birthday</code>	<code>CalculateAge()</code>
13	<code>variable</code> => mutation	<code>day</code>	<code>var day = 10; day = 11;</code>
14	switch case		



Walking @ ALCOR

Object Calisthenics rules

1. Only one level of indentation per method
2. Don't use the ELSE keyword
3. Wrap all primitives and strings
4. First class collections (wrap all collections)
5. Only one dot per line ~~dog.Body.Tail.Wag()~~ => `dog.ExpressHappiness()`
6. No abbreviations
7. Keep all entities small
[10 files per package, 50 lines per class, 5 lines per method, 2 arguments per method]
8. No classes with more than two instance variables
9. No public getters/setters/properties
10. All classes must have state



Walking @ My Passion

Different Maps



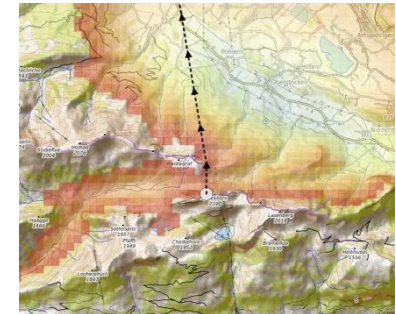
Swisstopo - Hikingmap



Swisstopo - Aviationmap



Swisstopo – Aerial imagery

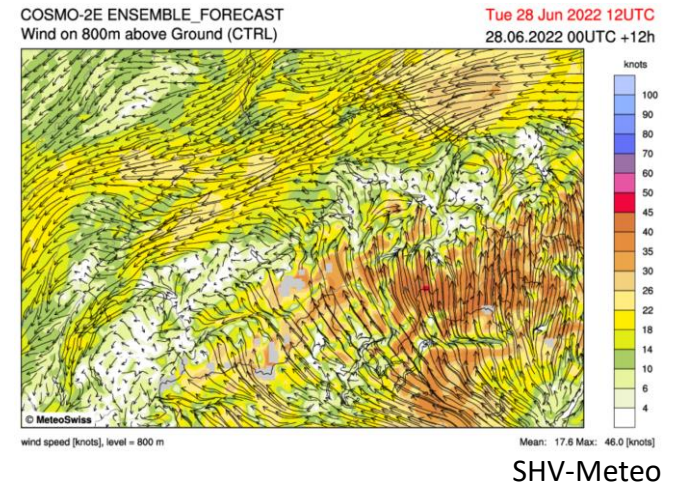
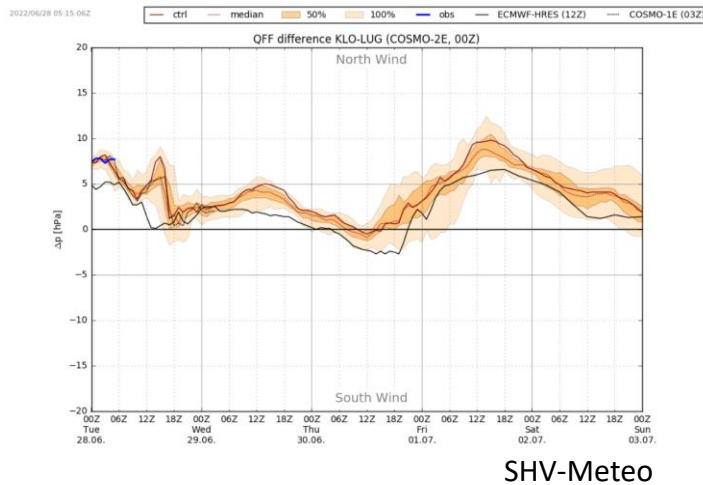


Parange.ch



Walking @ My Passion

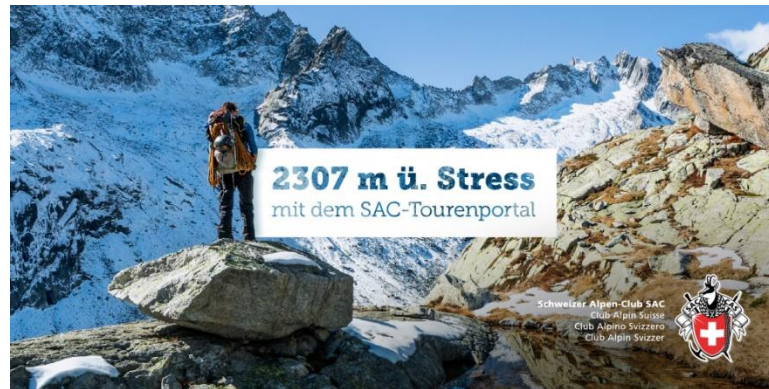
Forecast





Walking @ My Passion

Guides

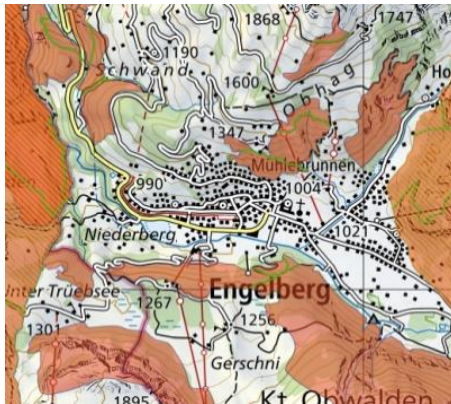


SAC-Tourenportal

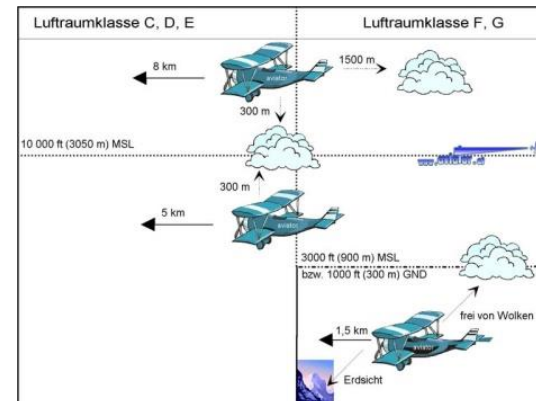


Walking @ My Passion

Rules



Swisstopo – Wildlife aerea



Visual Flight Rules (VFR)



Running



Kaltbrunn 1993



Running @ ALCOR

Refactoring

Refactor ***aggressively*** and ***constantly***



Running @ ALCOR

Code Smells

Switch Statements OOA Replace Conditional with Polymorphism Replace Type Code with Subclasses Replace Type Code with State/Strategy Move Accumulation to Visitor Replace Conditional Dispatcher with Command Replace Parameter with Explicit Methods Introduce Null Object	Inappropriate Intimacy COU Move Method Move Field Extract Class Hide Delegate Replace Inheritance with Delegation	Large Class BLO Extract Class Extract Subclass Extract Interface Replace Data Value with Object Replace Conditional Dispatcher with Command Replace Implicit Language with Interpreter Replace State-Altering Conditionals with State
Primitive Obsession BLO Replace Data Value with Object Encapsulate Composite with Builder Introduce Parameter Object Extract Class Move Embellishment to Decorator Replace Conditional Logic with Strategy Replace Implicit Language with Interpreter Replace Implicit Tree with Composite Replace State-Altering Conditionals with State Replace Type Code with Class Replace Type Code with State/Strategy Replace Type Code with Subclasses Replace Array With Object	Duplicated Code DIS Chain Constructors Extract Composite Extract Method Extract Class Form Template Method Introduce Null Object Factory Method Pull Up Method Pull Up Field Substitute Algorithm Adapter	Long Method BLO Extract Method Compose Method Introduce Parameter Object Move Accumulation to Collecting Parameter Move Accumulation to Visitor Decompose Conditional Preserve Whole Object Replace Conditional Dispatcher with Command Replace Conditional Logic with Strategy Replace Method with Method Object Replace Temp with Query
Divergent Change CHP Extract Class	Shotgun Surgery CHP Move Method Move Field Inline Class	Feature Envy COU Extract Method Move Method Move Field
Long Parameter List BLO Replace Parameter with Method Introduce Parameter Object Preserve Whole Object	Data Clumps BLO Extract Class Preserve Whole Object Introduce Parameter Object	Parallel Inheritance Hierarchies CHP Move Method Move Field



Running @ ALCOR

Programming Principals

- **KISS** (keep it simple, simian!)
- **DRY** (don't repeat yourself)
- **YAGNI** (you aren't gonna need it)
- **SOLID**
- **4 RULES OF SIMPLE DESIGN**
- **BALANCED ABSTRACTION PRINCIPLE**
- **Tell don't ask** (Law of Demeter)
- **LEAST ASTONISHMENT (WTF PRINCIPLE)**



Running @ ALCOR

Coupling and Cohesion

Cohesion

says how strongly related and coherent are the responsibilities *within* modules (classes) of an application

hence

it should be **MAXIMIZED**

Coupling

is the degree of interdependence *between* modules (classes) of an application

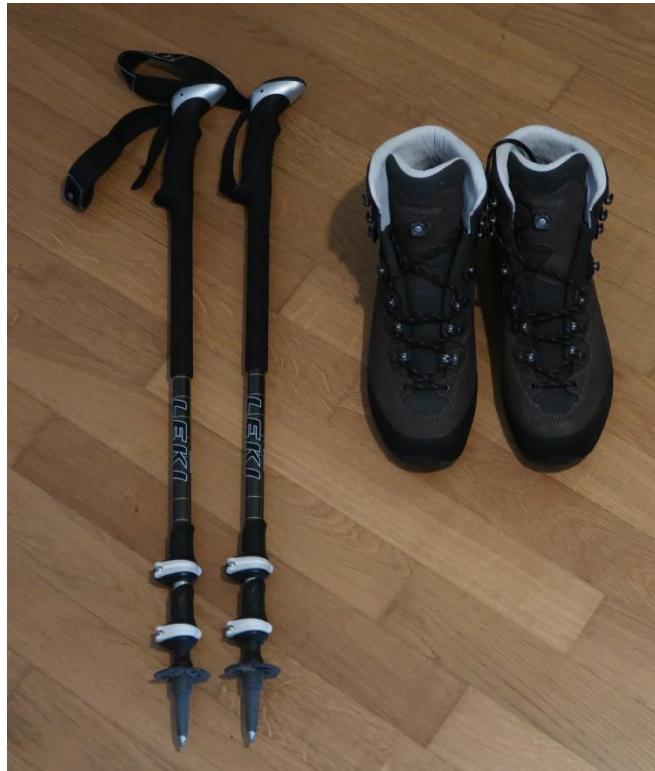
hence

it should be **MINIMIZED**



Running @ My Passion

Basic Tools





Running @ My Passion

more sophisticated Tools





Running @ My Passion

more sophisticated Tools

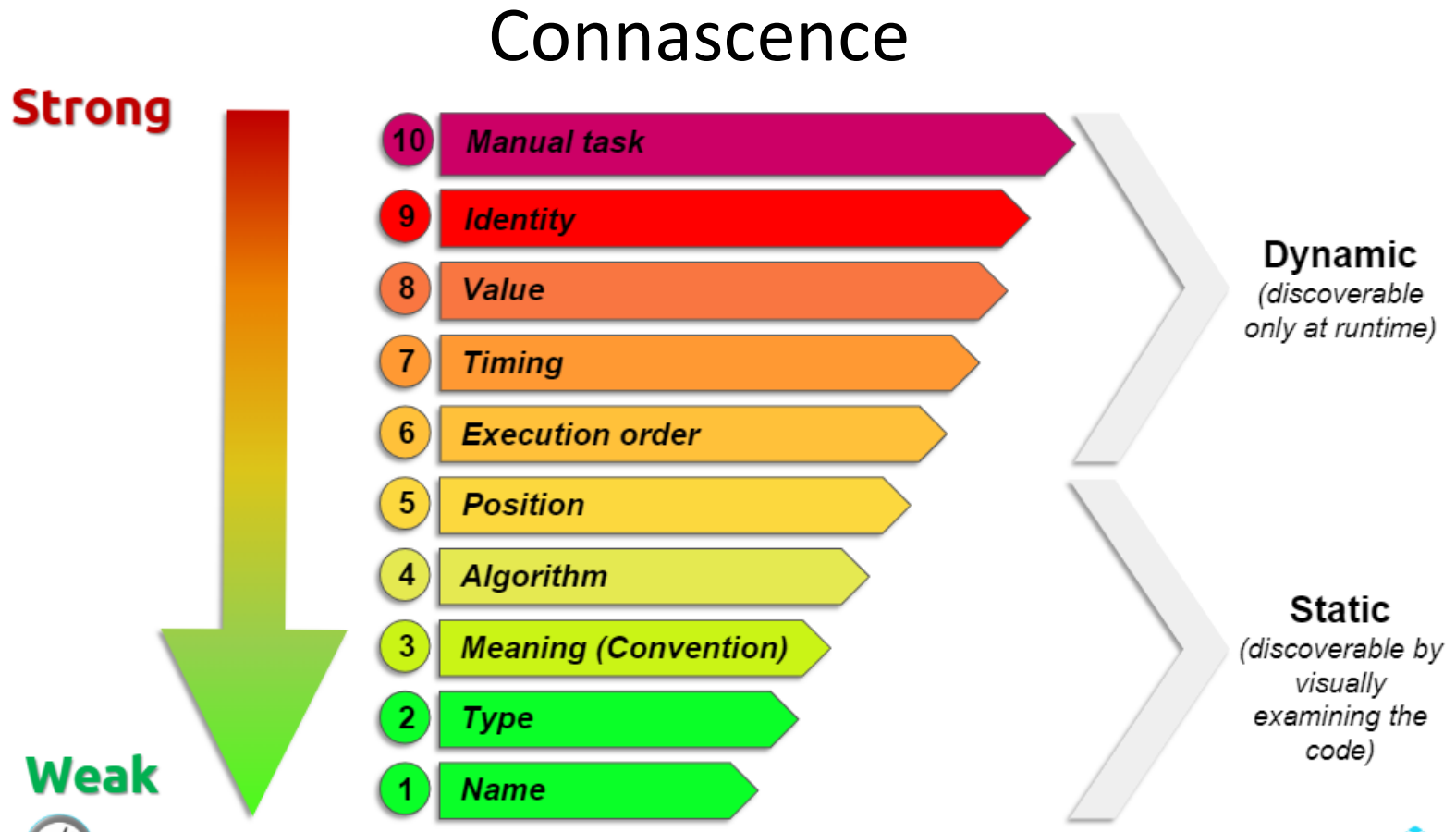


Flying



Worldmasters Winterthur 2004

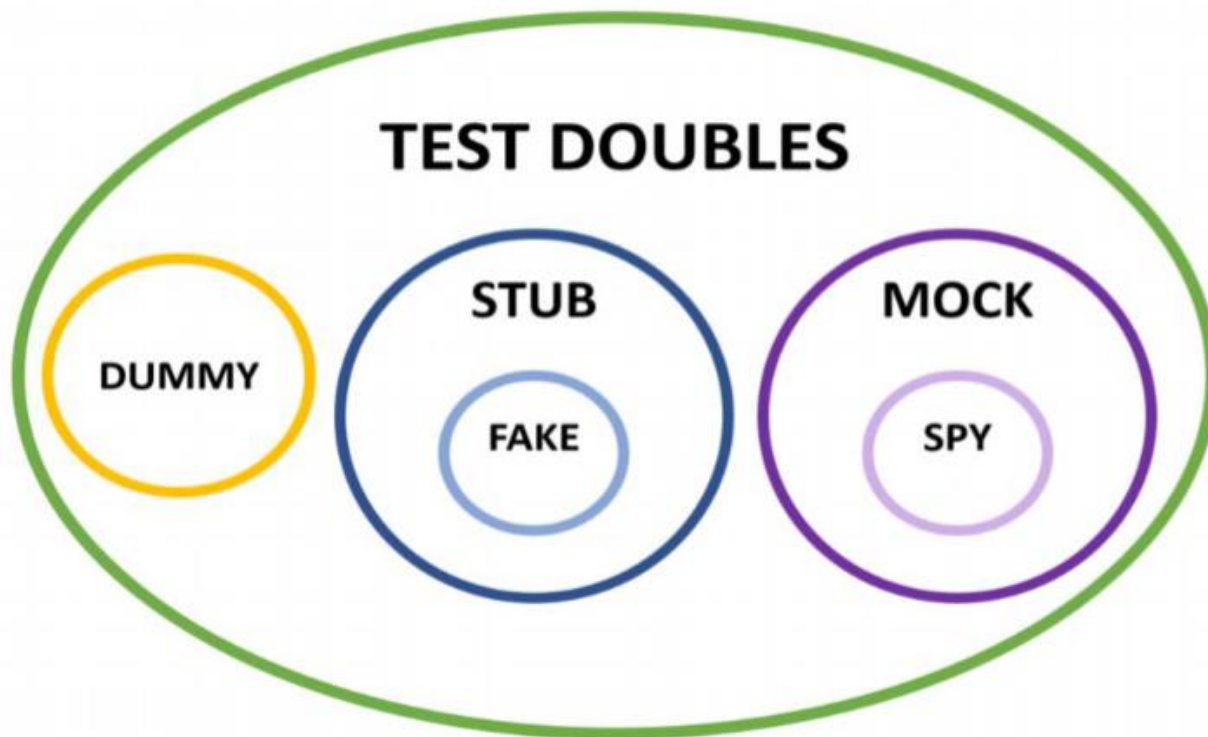
Flying @ ALCOR





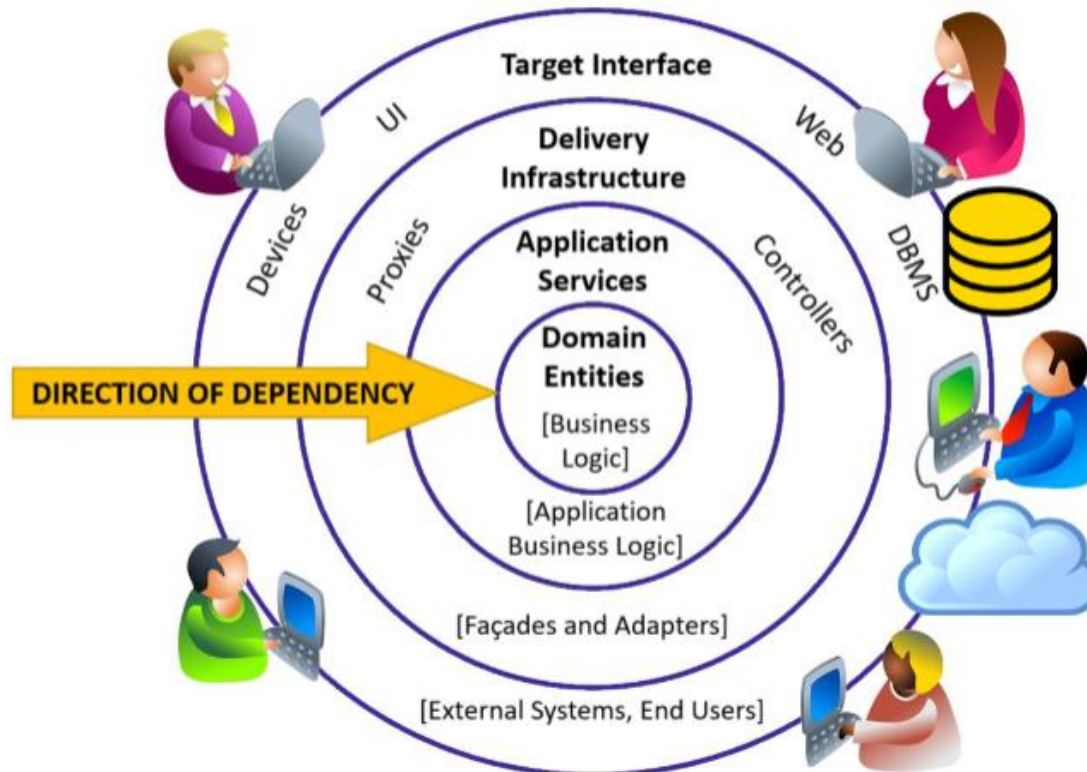
Flying @ ALCOR

Test Doubles



➤ Flying @ ALCOR

Clean/Onion/Hexagonal Architecture





Flying @ My Passion

More Tools





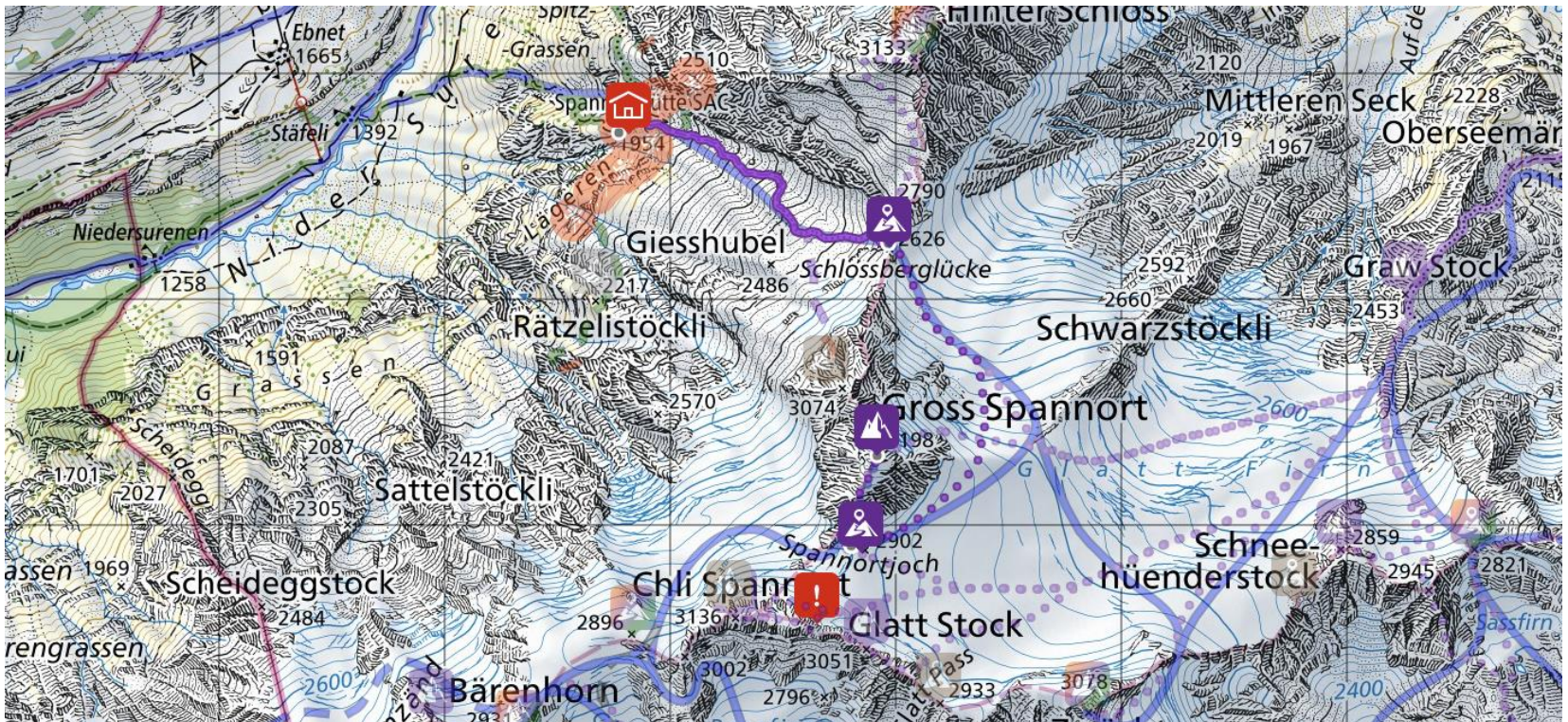
can you guess my passion?

Hike & Fly



What is Hike&Fly

Part 1: Planing





What is Hike&Fly

Part 2: Hiking to the Summit



Wildstrubel BE



What is Hike&Fly

Part 3: Flying to the Start



Brunnen – Vierwaldstättersee SZ

What is about the comparison?



Comparison

- 3 Parts
 - Rules
 - Tools
 - Guide –(lines)
 - Keep mind always on
-
- but



Comparison

One thing you can not
compare!

Comparison

- Reach the summit



Comparison

- Reach the summit
- Wind, weather, place is perfect



Buochserhorn NW

Comparison

- Reach the summit
- Wind, weather, place is perfect
- Take off smoothly



Alphubel VS

Comparison

- Reach the summit
- Wind, weather, place is perfect
- Take off smoothly from the ground
- Look back to the summit and the way you have done



Alainhorn V5

Comparison

**The emotion, the feeling at this moment you
can not compare!**



Lenzerheide GR

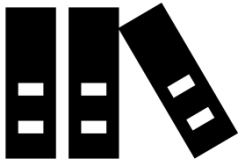


Marc Schuler – Alcor Academy – Flying – June 2022

Thank
you!



Thank you for flying with my



References

Images:

- Icons: Google search
- Images: my Album



Story:

- ALCOR Foundation Training



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